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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/850,975	05/08/2001	Naoki Toyama	MAT-8130US	2941

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EXAMINER

YENKE, BRIAN P

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 01/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/850,975

Applicant(s)

TOYAMA ET AL.

Examiner

BRIAN P. YENKE

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-11 is/are rejected.
- 7) ☒ Claim(s) 6 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6 .                      6) ☐ Other:

## DETAILED ACTION

### *Claim Objections*

1. Claim 1 is objected to because of the following informalities:

Claim 1, line 9 states "...according to positional a relation...", the claim should state, "according to a positional [a] relation...".

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-5 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moriwake et al., US 6,201,581.

In considering claims 1 and 7,

*a) the claimed a key signal generator for setting a key signal distribution formed by a first oval body surrounding a reference color of the screen in a three-dimensional color space and a second oval body surrounding the first oval body, and for generating a mixing key signal according to a positional relation among the source video signal, the first oval body and the second oval body in the key signal distribution; and a mixing*

Art Unit: 2614

*processor for taking out the foreground object component by the mixing key signal, and for mixing the object component with the background signal.*

Moriwake discloses an image synthesizing/editing device which sets a value of the key signal (key signal generating section 6, Fig 1) based upon the positional relationship/distance in 3D between background color inner sphere K1 (reference color) and the foreground color outer sphere K2 (Fig 26) (foreground picture).

However, Moriwake does not disclose ovals. Moriwake discloses the use of spheres in analyzing the relationship between the background and foreground picture.

The selection of a sphere, oval or another geometric figure/shape in ascertaining the distance between the figures is a design choice, and thus not a patentably distinct feature.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Moriwake which discloses the use of a smaller sphere K1, and a larger sphere K2 in ascertaining the distance between the video signal (the distance between the spheres, by utilizing other geometric figures/shapes such as a cube, since the selection is an arbitrary design choice.

In considering claims 2 and 8,

*a) the claimed a base clip level is a distance from the reference color to a cross point where the first body crosses with a vector starting from the reference color toward the source video signal is met by where the base clip level Fig 5b is the distance from the center of the reference color (C0, (Y0,U0,V0) to the starting point of ART (foreground picture).*

Art Unit: 2614

*b) the claimed a peak clip level is a distance from the reference color to a cross point where the second oval body crosses with a vector starting from the reference color toward the source video signal is met where the intersection of the background color and the foreground color (shown as the beginning point of the ramp (Fig 5b)) which extends to the end of the foreground picture (peak of ramp of Fig 5b).*

*c) the claimed the mixing key signal is a value responsive to a distance between the source video signal and the reference color, the value is saturated at the base clip level and the peak clip level with respect to the distance is met where the mixing key signal (key process 30, 35) for the Y and UV colors respectively is a value responsive to the base and peak clip level (Fig 2, Fig 5b).*

In considering claims 3 and 9,

*The claimed wherein the first and second oval bodies share a common center of the reference color of the screen and the first and second oval bodies are similar in shape is met where the reference color K1 and foreground color K2, share a common center as shown in Fig 26, where K1 and K2 are both spheres (similar in shape).*

In considering claims 4-5 and 10-11,

*The claimed comprising a screen signal generator for generating a screen signal by using the source video signal and the screen reference color, the screen signal indicates a screen component included in the source video signal, wherein said mixing processor subtracts the screen component from the foreground object component by the screen signal, so that the foreground object component is mixed with the background video signal is met chrome key processing section 5 (Fig 1) which includes*

Art Unit: 2614

a key signal generating section 6 and a picture synthesizing section 7, where the coordinate transformation circuit 27 subtracts the color-difference signal levels of the center color (background) from that of the foreground picture (Fig 2).

***Allowable Subject Matter***

3. Claims 6 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Prior art fails to show/suggest all limitations of base/intervening claims to also include a key signal generator setting a third oval body surrounding the second oval body in the key signal distribution, generating a color-canceling key signal which cancels a screen color component included in the source video signal according to a positional relation among the source video signal, the first oval body and the third oval body in the key signal distribution, and subtracts a screen color component from the foreground object component by the color-canceling key signal, so the foreground object is mixed with the background video signal.

Art Unit: 2614

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (703) 305-9871. The examiner work schedule is Monday-Thursday, 0730-1830 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John W. Miller, can be reached at (703)305-4795.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

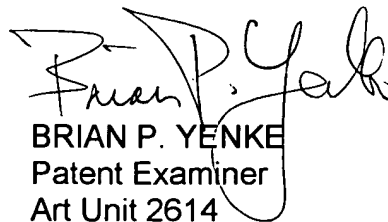
**(703) 872-9314**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-HELP.



B.P.Y

December 23, 2003



BRIAN P. YENKE  
Patent Examiner  
Art Unit 2614